

Application No. 10/509,356
Attorney Docket No. 2002B040A

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (presently amended) A process for the oligomerization of olefins, which process comprises the steps of contacting an olefinic feedstock containing a mixed ~~at least one~~ olefin ~~feed~~ having 4 ~~or~~ and 5 carbon atoms under oligomerization conditions with a selectivated crystalline molecular sieve oligomerization catalyst and recovering an olefinic oligomeric product, of which at least a dimeric ~~or a trimeric~~ component has an average degree of branching of at most 2.0 and a Type V double bond content of at most 10%.
2. (cancelled)
3. (original) A process as claimed in claim 2, wherein the average degree of branching is within the range of from 0.5 to 2.0.
4. (original) A process as claimed in claim 3, wherein the average degree of branching is within the range of from 0.8 to 2.0.
5. (previously presented) A process as claimed in claim 1, wherein the feedstock also contains propene.
6. (previously presented) A process as claimed in claim 1, wherein the feedstock contains at least one C₄ olefin.

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7. (original) A process as claimed in claim 6, wherein the feedstock contains by weight about 48 to about 65% butenes and about 35 to about 50% butanes.

8. (previously presented) A process as claimed in claim 6, wherein the octene product has an average degree of branching of at most 2.0, and a skeletal isomer content:

Type I	from 0.7 to 2.0
Type II	from 18.0 to 30.0
Type III	from 5.0 to 10.0
Type IV	from 45.0 to 65.0
Type V	at most 10%.

9. (original) A process as claimed in claim 8, wherein the octene product has a proportion of methylheptenes in the range of 62 to 83%.

10. (previously presented) A process as claimed in claim 6, wherein the dodecene product has an average degree of branching of at most 2.0, and a double bond structure as follows:

Type I	from 0.5 to 10%
Type II	from 25 to 45%
Type III	from 3.5 to 6%
Type IVA	from 45 to 65%
Type IVB	at most 3%
Type V	at most 5%.

11. (original) A process as claimed in claim 10, wherein the dodecene has a double bond structure within the following ranges:

Type I	0.5 to 2.8%
Type II	31.6 to 41.7%

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Type III	3.8 to 5.2%
Type IVA	46.2 to 52.9%
Type IVB	0 to 2.2%
Type V	0 to 1.2%.

12. (previously presented) A process as claimed in claim 1, wherein oligomerization is carried out at a temperature within the range of from 160°C to 250°C.
13. (previously presented) A process as claimed in claim 1, wherein oligomerization is carried out at a weight hourly space velocity within the range of from 0.1 to 4.0.
14. (previously presented) A process as claimed claim 1, wherein oligomerization is carried out at a conversion rate per pass of at most 65%.
15. (previously presented) A process as claimed in claim 1, wherein oligomerization is carried out at a pressure within the range of from 3.4 MPa to 10.5 MPa.
16. (previously presented) A process as claimed in claim 1, wherein the catalyst is selectivated ZSM-22 or selectivated ZSM-23.
17. (original) A process as claimed in claim 16, wherein from 10 to 50% of acid sites are selectivated
18. (previously presented) A process as claimed in claim 16, wherein selectivation has been carried out using 2,4,6-trimethylpyridine.
19. (previously presented) A process as claimed in claim 1, which also comprises the step of recovering a dimer fraction from the oligomer product.

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20. (previously presented) A process as claimed in claim 1, which also comprises the step of recovering a trimer fraction from the oligomer product.
21. (previously presented) A process as claimed in claim 1, which also comprises the step of recovering an oligomer product containing at least 10 carbon atoms.
22. (previously presented) A process as claimed in claim 1, which also comprises the step of oxonating the oligomer product and recovering a resulting aldehyde product.
23. (original) A process as claimed in claim 22, which also comprises the step of hydrogenating the aldehyde product and recovering a resulting alcohol product.
24. (original) A process as claimed in claim 23, which also comprises the step of esterifying the alcohol product.
25. (original) A process as claimed in claim 23, which also comprises the step of etherifying the alcohol product.
26. (original) A process as claimed in claim 22, which also comprises the step of oxidizing the aldehyde product and recovering a resulting acid product.
27. (original) A process as claimed in claim 26, which also comprises the step of esterifying the acid product.
28. (currently amended) A plasticizer composition comprising the product of the process of claim 24.
29. (original) A polymeric composition comprising a polymer and a plasticizer composition as claimed in claim 28.

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30. (original) A shaped structure formed of the plasticized polymer composition of claim 29.
31. (previously presented) A synthetic lubricant or lubricant component comprising the product of the process of claim 24.
32. (previously presented) A synthetic detergent or detergent component comprising the product of the process of claim 24.
33. (previously presented) An alcohol or alcohol mixture comprising the product of the process of claim 23.
34. (previously presented) An ester or ester mixture comprising the product of the process of claim 24.
35. (previously presented) An acid or acid mixture comprising the product of the process of claim 26.
36. (previously presented) The product of the process of claim 1.
37. (original) A process for the manufacture of an alkylarene, which comprises reacting the product of claim 36 with an arene and recovering the alkylarene.
38. (original) A process for the manufacture of an alkylarene, which comprises recovering from the product of claim 36 a C₁₀⁺ fraction, reacting the said fraction with an arene, and recovering the alkylarene.
39. (previously presented) A plasticizer composition comprising the product of the process of claim 27.

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40. (previously presented) A synthetic lubricant or lubricant component comprising the product of the process of claim 27.
41. (previously presented) A synthetic detergent or detergent component comprising the product of the process of claim 27.
42. (previously presented) An ester or ester mixture comprising the product of the process of claim 27.
43. (cancelled)
44. (previously presented) The product of the process of claim 24.
45. (previously presented) The product of the process of claim 26.
46. (previously presented) The product of the process of claim 27.

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SUPPORT FOR THE AMENDMENTS

Claim 1 has been amended to incorporate the limitation contained in paragraph [0068], wherein the feed is a mixed feed of C4 and C5 olefins. It is also been amended to delete the reference to "trimeric component" for clarity.

Claim 43 has been cancelled at the request of the Examiner, to avoid duplicate claims.

It is believed there is no possibility of new matter.